

The EIC may also perform user administration. As shown in Fig. 15(h), the system prompts the EIC at step 1563 with the question whether to perform user administration. If so, the EIC selects "User Administration" at step 1564, whereupon a user list is displayed by the system at step 1565. The system 300 then prompts the EIC with the question whether to add a user at step 1566. If so, the system 300 then prompts the EIC with the questions whether to create an account. If the EIC does not want to add a user, then the system 300 prompts the EIC with the question whether to edit a user at step 1569. The EIC then edits the user information at step 1570 and the system 300 saves it. Alternatively, the system 300 may prompt the EIC with the question whether to delete a user at step 1571. The EIC then selects "Delete" and the system 300 then displays a delete confirmation window at step 1573. The system 300 also prompts the EIC at step 1574 with the question whether to search the list. If so, a determination is made at step 1575 whether to view all/refresh that list. Other search strategies and administrative means are available to the EIC and shown in Figs. 15(i), 15(j), and 15(k).

#### Editor Module

An Associate (or Review) Editor have the ability to assign reviewers (or referees) to review each manuscript for publication. Access to specifically assigned manuscript information and its electronic file is instantly available upon assignment from the Editor-in-Chief. Reviewer assignments is facilitated through the use of a searchable, reviewers' database, with search fields for name, key words, and area of expertise. Each reviewer's personal information, number of assignments, and manuscript review history is displayed before initial invitation to review. The number of assignments will vary per client and is customizable; furthermore, the ability to remove or change assignments is available until a final decision is rendered on the manuscript. Invitations will be made via e-mail communication. All e-mails in the system is editable before sending, in each center (except any system-generated, auto-e-mails). The AE should also have the ability to render an immediate decision on any manuscript, which in turn will render a decision e-mail to the corresponding author, and populate the database in all of the appropriate locations, such as each individual manuscript history.

The role of the AE is to manage the peer review of each assigned manuscript. The AE must utilize the available manuscript and reviewer data to make the appropriate selections based on expertise and workload, and maintain the ability to make changes to assignments up until decision. The AE also has the ability to render final decisions, and access all of the history of every submitted manuscript assigned to him or her only. Any e-mail from any center is editable so stock wording can be customized as necessary; this is especially useful for decision e-mails.

The AE should have the ability to grant access to each reviewer that agrees to review. This access is limited to the specific manuscript that the reviewer has agreed to review, and initiated a button that send an e-mail to the reviewer alerting him or her of the confirmed assignment. This access is removable by the AE at any time until a final decision is rendered. If a reviewer declines to review, is not needed, or accepts late and is no longer required for review, the AE has similar e-mails to select that mark the reviewer and manuscript history appropriately. Limited and specific access is paramount to the security required for peer review, and the AE controls this access based on the responses received from reviewers. Marking the reviewer response and performance is also crucial to the peer review process, as monitoring performance will dictate future selections and improve the quality of the reviewer database.

When revisions of previously submitted manuscripts are submitted, they should flow directly to the AE's center for re-assignment. Revisions appear behind a separate menu item than original submissions in the AE Menu. A complete history of the manuscript and its revision (s), including the reviewer and editor comments attributed to each version, will accompany each revision in the manuscript history. Any comments in reply to the editor or reviewers from the author are also displayed. Reviewers that have indicated a willingness to review the revision is automatically invited, and only need to be marked as agreed to gain access to the revision. The process should proceed as normal from that point on, and includes the ability to remove or change reviewer assignments until a final decision is rendered. The revision process does not need to flow through the Administration center like an initial submission. The AE may assume control over the final decision on revisions, and their peer review. Reviewers do not need to be invited to review manuscripts they have already indicated they will review, but the ability to remove or change assignments remains. All comments, versions, and data surrounding a manuscript are essential to a fair review and decision.

While the ability to make a decision is available to the AE at any time during the process, the AE has the ability within the reviewer assignment area to render decisions based upon reviewer recommendations. Decision options are presented, and a decision e-mail is presented including the reviewer comments; this e-mail is editable, then sent to the corresponding author, with assigned reviewers, the Editor-in-Chief, and the Administrative center copied on the notification, which is written to the database at that time. The AE typically makes the final decision on manuscripts and generates the decision letter. The database is marked accordingly, with all associated dates included. All other associated parties need to be notified of the decision, and an acceptance will initiate the production process.

The AE has access to all assigned manuscripts and manuscript histories through a multi-field search function in AE center. The history should include but not be limited to the following: all of the steps of the peer review process and their dates of completion, all comments and reviews associated with the manuscript, all descriptive information about the manuscript, its assigned reviewers and associated dates of response and assignment, and any correspondence associated with the manuscript. In order to support users and assist in the management of the peer review process, the ability to search for any manuscript and display its history is vital to the success of the system and the communication with its users. For the AE, this information is mainly relevant in the monitoring of reviewer performance for timely decision-making.

The AE has numerous reports and listings available via links in the AE Menu and in the Reports Menu. The reports and listings can be customized per client, but several standard items are included with the system. Samples of listings include but are not limited to accepted and rejected manuscripts and outstanding revisions assigned to each specific AE only. Samples of reports include reviewer listings, reviewer performances, and outstanding reviews. All reports and listings are vital to the management and subsequent tracking of and periodic reporting on the process of peer review, along with the rendering of timely decisions.

The AE has the ability to add to, maintain, edit, and update the user database on a limited basis. The database is searchable by name, key word, and area of expertise. The AE can garner and add new reviewers by accessing the author's suggested reviewers listing, and otherwise assist in the maintenance of the user database. Other than reviewer status, however, the AE cannot grant access rights or user IDs and Passwords. A searchable database will facilitate its manipulation and information retrieval.

Much of the above is provided by means similar to the processes shown in regards to the EIC. For example, the editor center menu is similar in many respects to the EIC menu. Figs. 16(a) through 16(e) illustrate those methods which are different.

Beginning at the editor center menu 1601, the system prompts an editor at step 1602 whether to assign reviewers. If not, the system 300 then prompts the editor with the question whether to view manuscripts at step 1609. Otherwise, the system 300 prompts the editor with the questions whether the manuscripts to be viewed are new manuscripts or revised manuscripts. The editor then selects the appropriate type of manuscripts at steps 1604 or 1607, and the list of such manuscripts is displayed by the system 300 at steps 1605 or 1608. In either case, the editor is then prompted by the system 300 with the question whether to view the manuscript details at step 1610. The editor then selects "View Manuscript Details" at step 1611, and the system 300 displays those details at step 1612. Specific methods of assignment or removal of the reviewers are shown in

Figs. 16(b) through 16(d). Moreover, methods in which the EIC finalizes any decisions are shown in Fig. 16(e).

### Reviewer Module

Reviewers (or Referees), once responding positively to e-mail inquiries about the review a  
5 manuscript, have the ability to access the electronic file of the specific manuscript agreed to, and all  
of its related and relevant information. Reviewers have the ability to print out the manuscript as  
well. Any manuscripts in need of review will appear in an ordered listing by manuscript number.  
Reviewers need quick access to the manuscript and its data, and typically need to print the  
manuscript for closer review and notes. Manuscript number, along with other related data (such as  
10 title and author(s)) identifies E-mail communications concerning manuscript review, in order to  
ensure an accurate and secure review process.

Reviewers will have links to instructions for review and all of the necessary manuscript  
information. Understanding what is required for review and the background data related to a  
manuscript enables the opportunity for a fair and successful review, while allowing for exceptions,  
15 such as conflict of interest, to be noted immediately to the managing editor.

When reviewing revisions of previously submitted manuscripts, reviewers have access to  
the following: all of the manuscript versions and their associated data, any comments or responses  
from the author(s) to the reviewers and the Associate Editor, the original decision letter(s) including  
all editor and reviewer comments, and any of their own original reviews and comments. In order to  
20 complete a fair review, all manuscript versions, data, editor and review comments, and original  
reviews are necessary for reference and consideration.

Reviewers have a client-approved score sheet for scoring the manuscript, comment boxes  
for detailed remarks, and recommendation options for the manuscript decision, data that is carried  
into and displayed with the manuscript's history. Judgment on adherence to specific client policies  
25 are also available, along with the other possible client-specific recommendations, and the notation  
of willingness to review and possible revisions of the manuscript, all of which is also displayed  
with the manuscript's history.

Reviewers have the ability to compose their remarks in a word processor and copy and paste  
them into the review forms. They then have the option to reset their review and start over; save  
30 their review and return to it; or submit their review the Associate Editor and automatically remove  
their access to the manuscript pending further notice. Reviewers need the ability to begin a review,  
leave it for any reason, and then return to it when convenient. They also may wish to reconsider  
and revise their review before finally submitting it. Once it is finally submitted, access to the  
manuscript are removed to ensure manuscript confidentiality.

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The methods of reviewing manuscripts in accordance with the present invention are shown in Fig. 17. Starting at a display of reviewer instructions at step 1701, the reviewer is prompted with the question whether to view the details of manuscripts assigned to him/her. If so, the reviewer selects "View Manuscript Details" at step 1703, and those manuscript details are displayed by the system 300 at step 1704. The reviewer may also be prompted by the system whether to return to the list of manuscripts (step 1705) or return to the reviewer menu (step 1706).

In the event those questions are answered in the negative, the reviewer is then prompted with the question whether to view the manuscript proof at step 1707. If so, the reviewer selects a title at step 1708, and the proof is displayed at step 1709. In the event that the reviewer did not want to view a proof, the system 300 prompts the reviewer with the question whether to reset the review form at step 1710. If so, the system 300 blanks out the review fields at step 1711 and the reviewer may start all over. If not, the system prompts the reviewer at step 1712 whether to save the review form. If so, a determination is made at step 1713 whether to leave the form open (*i.e.*, remain outstanding for review). If not, the system 300 prompts the reviewer whether to submit at step 1714. If so, the reviewer then selects "Submit" at step 1715, the system 300 removes the title from the list of manuscripts at step 1716. Preferably, in all cases, a plurality of reviewers are used to review each submitted manuscript.

#### Miscellaneous Requirements

Some clients should process the final decision on a manuscript through either the Editor-in-Chief center or a separate center reserved for editorial board members. Associate (or Review) Editor decisions is considered preliminary, and the EIC or editorial board have the ability to make the preliminary decision final, or recommend and implement a change of that preliminary decision. All decisions and their accompanying data (such as date of final decision) are written accordingly in the database. Some clients prefer to consider the recommendation of the assigned Associate (Or Review) Editor before having their EIC, a group of editors, or a predetermined editorial board make a final, official decision on a manuscript concerning publication. All of this data is tracked in the database for reporting.

The listing of manuscripts with preliminary decisions is generated with a date range query, and provide access to the electronic file of each manuscript, along with all of its historical data and associated reviewers, scores, comments, and (editable) preliminary decision letters. The final decisions will be rendered on a regular schedule and the data needs to drawn accordingly. All of the relevant versions of the manuscript and their historical data need to be available to ensure a fair decision is made. If the preliminary decision is approved, the accompanying decision letter may need some revision before being sent.

## System Details

In a preferred embodiment of the present invention, system 100 runs as an Internet-based application, using a conventional web server (*e.g.*, the Apache HTTP server, version 1.3) which is compiled with PHP. The Apache server, as is well known, consists of voluntary contributions made by many individuals on behalf of the Apache Group. It was originally based on public domain software written at the National Center for Supercomputing Applications, University of Illinois, Urbana-Champaign. For more information on the Apache Group and the Apache HTTP server project, please see <<<http://www.apache.org>>>.

As is also well known, PHP is a server-side scripting language for creating dynamic web pages. When a visitor opens the page, the server processes the PHP commands and then sends the results to the visitor's browser, just as with ASP (*i.e.*, "Active Server Pages", a feature available to users of the Microsoft Internet Information Server (IIS)) or ColdFusion (a product developed by Allaire Corporation, Cambridge, MA U.S.A.). Unlike ASP or ColdFusion, however, PHP is an "open source" and cross-platform. PHP runs on Windows NT and many UNIX versions, and it can be built as an Apache module and as a binary that can run as a CGI. When built as an Apache module, as in accordance with the present invention, PHP is especially lightweight and speedy. Alternatively, system 100 may run as an Internet-based application on the RedHat LINUX version 6.1, with an Intel-based operating system.

System 100 should also preferably support the limitations of browsers such as the Netscape version 4.x and Internet Explorer versions 4.x and 5.x. Browser versions must support certain features, like JavaScript, and limitations are determined to ensure minimum requirements for system functionality. The relational database application is MySQL. SendMail is the e-mail server implemented into the system, since SendMail interfaces with PHP, and can send e-mails with altered headers.

System 100 are also able to read and parse Rich Text Format ("RTF") documents, which users upload into the system 100. RTF is one conventional format that authors will use for their manuscripts that they upload, and the system 100 must read and parse this format to perform format conversions. Additionally, the system 100 is able to read PDF documents that users upload into the system 100. PDF is another conventional format that authors will use for their manuscripts that they upload, and the system 100 must read and display this format so system users can view submitted manuscripts online. Yet another document format that the system 100 is able to read and parse is PostScript. PostScript is a widely used format that authors will use for their

manuscripts that they upload. Accordingly, the system 100 must read and parse this format to perform format conversions.

The system 100 is able to convert uploaded manuscripts to web-based (*e.g.*, HTML) and PDF formats. These conventional formats are typically used for presentation purposes, so that system users can view submitted manuscripts online. Similarly, the system 100 is able to convert web-based pages into PDF format, to allow for consistent printing of web-based manuscripts, report screens, and other selected web pages desired and/or required for printing.

The system 100 should support text and special characters entered into web forms. Users will, thus, be able to enter metadata into web forms either by typing directly or copying and pasting from word processors for text) or entering specified codes for special characters. This data will then be captured in the database 101 and displayed for presentation or other purposes.

The system 100 is able to accept various image formats (*e.g.*, GIF, TIF, MPEG, PNG) that users upload into the system 100. This is due to the fact that users will upload a variety of image formats for figures, tables, graphs, and equations that supplement the text of their manuscripts. The system 100 must, accordingly, read these formats to perform format conversions to JPEG (.jpg) files for online presentation and display.

Preferably, the system 100 is able to submit a user-entered credit card number to an automated credit checking service online via the Internet. When users enter credit card numbers to purchase service, pay a fee, *etc.*, the credit card are authorized. The system 100 are also able to read and parse the results from a credit checking service when it responds to a credit card number submission. Before providing users with what they are attempting to acquire or otherwise pay for, the system 100 must correctly identify that their credit card is valid.

#### Creating An Account

For publishers who wish to allow users to create their own accounts when they first access the system 100, a defined process is implemented to gather information from users and then create a user account with a defined level of access to the system. Administrative personnel will have the opportunity to grant additional access to specific users whenever necessary. When users opt to create an account by clicking on the Create An Account button 505 (or any other similar such linked field), they will be shown a window that prompts for information about the user. A typical window 600 prompting a user for information is shown in Fig. 6. Publishers may choose to make specific fields optional or required, and may choose to remove or add a field to this page. Required fields are indicated with bold typeface. Instructions 601 are also provided.

A plurality of fields 602 initially prompt the user for name information (*e.g.*, Salutation (*e.g.*, Dr., Mr.); First Name; Middle Initial; Last Name; Suffix (*e.g.*, Jr., Esq.)). The publisher

preferably determines which of these fields is present and which ones is mandatory. First Name and Last Name should always be required. A plurality of other fields 603 prompt the user for other information. For example, the Institution fields prompt the user for institution affiliation (*e.g.*, Institution name and Department name). Various other contact information prompt for user's location and other contact information (*e.g.*, Address 1; Address 2; City; State; Zip; Country (which may be drop down); Phone; Fax; E-mail; 2<sup>nd</sup> E-mail). The 2<sup>nd</sup> E-mail address includes a radio button option to specify whether this address is used for e-mail communications.

In addition to such contact information, window 600 may include the following. User Index Information fields (not shown) prompt for user's professional interests and associations. This can be especially helpful for example, to allow other users to search upon users' interests and expertise. A Key Words field permits users to enter as many key words that describe him/herself as desired. These key words are separated by commas or by carriage returns. A Membership Information field in the form of a Yes/No radio button selection lets the user specify if he/she is a member of the client organization, and the user ID field lets a user enter a preferred user ID.

If a user enters a preferred user ID, the system will verify that user ID has not already been selected by another user. If so, the user will be prompted to enter another ID. If the user does not enter a user ID, then the system will create an ID, which typically is based on the user's e-mail address (which is usually a required field). A Submit Information button may be used to permit the user to get a user account when all the required fields are filled out. Selecting this button will verify that the user fills out all required fields. If all required fields are appropriately filled out, then all entered information will be saved and the user will be taken to the next window in the process of creating an account. A Return to the Log-In Screen button can be used to allow a user to return to the Log In window without requesting a new user account. However, selecting this option will discard any information the user has entered into any of the fields.

#### Entering the System

When the system 100 users successfully log in to the system, they will be shown a main menu 700 as shown in Fig. 7. Specific main menu options that are displayed to the user depend upon the user's level of access as determined by his or her member organization or society 701. Each of the possible menu options are called centers, and each center is associated with a particular role of the various types of end-users for whom the system 100 is intended.

The main menu window 700 provides a user with options to centers that correspond to the various roles they perform in the submission, peer review and decision-making processes facilitated by the system 100. Brief instructions 702 are typically found at the top of the main menu window 700. An Author center field 703 is a hyperlink to the Author center module 106 (Fig. 1). This link



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takes users to the module where manuscripts may be submitted for consideration for publishing. Most users will have access to this module. This is the lone, default center to which users are given access when they create their own user account. A Reviewer center field 704 is a hyperlink to the Reviewer center module 109. This link takes users to the module where they may open, review, make comments on, and rate manuscripts on which they are tasked as reviewers. Users who are slated as potential manuscript reviewers will be provided with this link. An Editor center field 705 is a hyperlink to the Editor center module 110. This link takes users to the module where they may assign and coordinate reviewers for a manuscript, and make decisions as to whether a manuscript is approved or rejected. An Editor-In-Chief center field 706 is a hyperlink to the Editor-In-Chief center module 108. This link takes users to the module where they may assign manuscripts to editors and manage user accounts, and is typically only accessible to the one individual who the Editor-In-Chief for the particular journal. An Admin Center field 707 is a hyperlink to the administrative module 107. This link takes users to the module where they may administer user accounts, manage system behavior, and view reports on manuscript submission and review status. An Exit System button 714 is a button that users can select to log out and exit the system 100. Selecting this button logs a user out of the system 100 and returns the user to the Log In window.

Referring now to Fig. 18, a flowchart illustrating a special character translation application which may be used in the system and methods according to the present invention will now be explained. The system 300 first inspects submitted manuscripts for special character fonts at step 1801. That is, some authors may choose to use "custom" or non-standard fonts which include special characters not recognized by standard word processing formats (*e.g.*, RTF). The system 300 includes a look-up table (not shown) of known conversions for such custom and non-standard fonts, and at step 1802 system 300 looks up any special characters detected upon the inspection carried out at step 1801. It then inserts translated codes (which themselves are standard) from the look-up table at step 1803, and maps the manuscript with the translated codes to a new file at step 1804.

Various modifications of the methods and systems disclosed herein above are possible without departing from the true spirit and scope of the present invention. For example, in the foregoing description where the use of the phrase "... the system 300 prompts the user with the question that ...", other means such as buttons and hyperlinks may provide this functionality. It is understood, therefore, that within the scope of the following claims, the present invention may be practiced otherwise than as has been specifically described in the foregoing embodiments.

What I claim as my invention is:

1. A publishing system, comprising:
  - a database adapted to store a plurality of documents;
  - a plurality of computers, each of which is adapted to be coupled to said database;
  - a network connecting said plurality of computers together for communication of data
- 5 relating to said plurality of documents among said plurality of computers and said database;
  - means for submitting a new document to said database;
  - means for collaboratively reviewing said new document;
  - means for editing said reviewed new document;
  - means for relating said new document to said plurality of documents; and
  - 10 means for publishing a journal of a selected portion of said plurality of documents.
2. The system according to claim 1, wherein said plurality of computers comprises a server and a plurality of clients.
3. The system according to claim 2, wherein said server comprises a web server and said plurality of clients each further comprise a browser.
4. The system according to claim 3, wherein said submitting means further comprises first means for translating said new document from a first data format to a second data format.
5. The system according to claim 4, wherein said first data format comprises a native word processor format and said second data format comprises a format compatible to said browser.
6. The system according to claim 5, wherein said publishing means further comprises second means for translating said selected portion of said plurality of documents from said second data format to a third data format.
7. The system according to claim 6, wherein said third data format comprises a format selected from the group consisting of conventional typesetting formats and conventional page layout formats.

8. The system according to claim 2, wherein said server further comprises means for searching said database.

9. The system according to claim 4, wherein said second data format comprises a hypertext mark-up language (HTML) format.

10. The system according to claim 8, further comprising a removable medium that is adapted to store said database and includes said means for searching said database.

11. The system according to claim 10, wherein said removable medium further comprises means for communicating with said server.

12. The system according to claim 11, wherein said communicating means comprises said browser.

13. A publishing method, comprising the steps of:

providing a computer system at one location, said computer system comprising a database that is adapted to store a plurality of documents, a plurality of computers including a web server and a plurality of clients, each of which is adapted to be coupled to said database through a browser, and a network connecting said plurality of computers together for communication of data relating to said plurality of documents among said plurality of computers and said database;

inputting a new document to said computer system from another location displaced remotely from said one location, said new document having been input in a native word processor format;

translating said new document from said native word processor format to a format compatible with said browser;

storing said new document within said database in both said native word processor format and said browser-compatible format;

relating said new document to said plurality of documents;

accessing said new document in said browser-compatible format;

collaboratively reviewing said new document in said browser-compatible format;

translating said new document from said word processing format to a typesetting format; and

publishing a journal of a selected portion of said plurality of documents in said typesetting format.

14. The method according to claim 13, further comprising the step of publishing said journal in said browser-compatible format.

15. The method according to claim 13, further comprising the step of publishing said journal in a format compatible with a removable medium.

16. The method according to claim 13, further comprising the steps of:

assigning a plurality of peer reviewers to review said new document, said plurality of peer reviewers being located at a third location displaced remotely from said one location and said other location; and

notifying said plurality of peer reviewers through said network that said new document is available for review.

17. The method according to claim 16, further comprising the steps of:  
associating a review and grading form to said new document;  
sending a copy of said associated form and said new document to each of said plurality of peer reviewers;

5 providing means in said associated form for said plurality of peer reviewers to enter their grades and comments;  
collecting said associated form from each of said plurality of peer reviewers; and  
providing means in an editor center to make decisions regarding publication of said new document.

18. A publishing system, comprising:  
a database adapted to store a plurality of documents, each of which was written by one or more authors in a native word processor format;  
first server means for managing said database;  
5 second server means for hosting an Internet website that is accessible by a plurality of clients, each of which is adapted to be coupled to said database through a browser;  
a first code segment for submitting a new document to said database in said native word processor format;  
a second code segment for translating said new document from said native word  
10 processor format to a browser-compatible format;  
a third code segment for reviewing said new document in said browser-compatible format;  
means for storing and retrieving said new document in said native word processor format and said browser-compatible format;  
15 a fourth code segment for relating said new document to said plurality of documents;  
a fifth code segment for translating said plurality of documents from said browser-compatible format to a typesetting format; and  
means for publishing a journal in said typesetting format of a selected portion of said plurality of documents.

19. The system according to claim 18, further comprising:  
a first code subsegment for inspecting said new document for special characters;  
a look-up table storing a plurality of symbols in a plurality of codes representing  
said special characters

5 a second code subsegment for looking up in said look up table and comparing same  
to determine if said new document contains one or more special characters corresponding to said  
plurality of symbols stored therein;

a third code subsegment for translating said one or more special characters into a  
standardized code;

10 a fourth code subsegment for inserting said translation into said new document; and  
a fifth code subsegment for mapping said new document with said translation  
inserted therein to a new file in said database.

20. The system according to claim 18, further comprising means providing a draft center  
for collaborative use by a plurality of authors prior to submitting a new document to said system.

### Abstract of the Disclosure

A publishing system includes a database that is adapted to store a plurality of documents, a plurality of computers, each of which is adapted to be coupled to the database; a network connecting the plurality of computers together for communication of data relating to the plurality of documents among the plurality of computers and the database, means for submitting a new document to the database, means for reviewing the new document, means for relating the new document to the plurality of documents, and means for publishing a journal of a selected portion of the plurality of documents. The plurality of computers includes a server and a plurality of clients, and the server is a web server with the plurality of clients each further including a browser.